

**PHASE II ESA WORK PLAN FOR  
MULTIPLE PROPERTIES  
AMBRIDGE AREA BROWNFIELDS PARTNERSHIP  
AMBRIDGE BOROUGH, BEAVER COUNTY, PENNSYLVANIA**

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## 1.0 INTRODUCTION

This Phase II Environmental Site Assessment Work Plan (Phase II ESA Work Plan) has been developed on behalf of the Ambridge Area Brownfields Partnership (the Partnership). The Partnership's intention is to **investigate and evaluate environmental conditions** at multiple properties located within the Borough of Ambridge (Borough), so that development of the properties can proceed with the stated objective of revitalizing an unproductive area of the Borough. Additionally, the Partnership is **seeking liability protection** from the Pennsylvania Department of Environmental Protection (PADEP) under the Pennsylvania Land Recycling Program (commonly referred to as "Act 2").

The Phase II ESA program will **evaluate both surface and subsurface soil quality** at each of the individual properties, as well as **evaluate groundwater quality** across the grouping of multiple properties. The intent of the Phase II ESA Work Plan is to present the investigative rationale, the investigative methodology, and the procedures for data analysis, evaluation, and reporting.

A portion of the Phase II ESA activities will be performed using grant **funding received from** the United States Environmental Protection Agency (U.S. EPA) Brownfield Pilot Demonstration Program. The remaining work will be performed with grant **funding received from** the Pennsylvania Department of Community and Economic Development (DCED).

### 1.1 Background

The Partnership has selected the following properties for evaluation under this Phase II ESA program and is working with each of the individual owners in developing the property:

- The Nineteenth Street Right-of-Way property;
- Toth property; |
- CECO properties (**two parcels** located adjacent to Nineteenth Street Right-of-Way); 4/
- Fourteenth Street Corp. property; 2
- Ambridge Industrial properties (**three parcels** located between Eleventh Street and Fourteenth Street); and 14, 11, 10?
- Former Bollinger Steel property. 12

The location of the multiple properties, within the Borough, is shown on Figure 1-1. Figure 1-2 is a Site Plan showing the individual property locations.



The Partnership intends to conduct the Phase II ESA to characterize potential environmental quality conditions associated with the historical uses of each of the properties. The **intended outcome of the Phase II ESA is to collect sufficient information to either:**

- Demonstrate the current attainment of Act 2 standards; or
- Develop an Act 2 Cleanup Plan that would outline the remediation activities required to attain Act 2 standards.

The Partnership is working with Moltoni Corporation (Moltoni) and Project Planning, Management and Development Pty. Ltd. (PPM) in redevelopment planning for several of the properties. *not all?* The **proposed project provides for demolition of existing structures, remediation (as necessary to support redevelopment activities), and redevelopment of the properties into a multi-use residential and commercial area.** A feasibility report describing the proposed redevelopment plan has been included as Appendix A.

## 1.2 Description of Project Area

Each of the properties is located within the Borough of Ambridge. The properties are situated in an area of Ambridge that has **historically been used primarily for industrial purposes over the years.** However, there are residential neighborhoods located within a few blocks of each of the properties. In general, the **properties are bounded to the west by Merchant Street, to the east by Duss Avenue, to the south by Eleventh Street and the Borough of Ambridge Municipal Building, and to the north by additional industrial properties.** Figure 1-2 is a site plan of the properties. These properties are described in detail below.

### 1.2.1 General Information

**All of the properties are easily accessible.** No security measures such as a chain-link fence surround any of the properties to prevent access, with the exception of the CECO properties. A chain-link fence does surround a ravine located adjacent to the Nineteenth Street Right-of-Way. There are buildings located on each of the Properties, with the exception of the Nineteenth Street Right-of-Way property. **Buildings on the CECO property appear to be in good condition. The buildings on the remaining properties range from fair to poor condition.**

### 1.2.2 The Nineteenth Street Right-of-Way Property

This is the only property of the four properties to be investigated that is currently **owned by the Borough of Ambridge.** It is also the only property that **does not currently contain building structures.** The property, which covers approximately **2 acres**, is bordered to the south by the Electrical System Division of CENTRIA office, two undeveloped industrial sites, and a parcel of land owned by the Ambridge Borough Water Authority. The **northern border is a natural ravine** and property owned by Waste Management of PA. The property is **not fenced**; however, a chain-link fence has been installed around the adjacent ravine area to the north.

### 1.2.3 Toth Property

This property is identified as the "Toth Property" and is currently owned by Edward and Olga Toth. The property covers approximately **10.6 acres**, and is bordered on the south by Fourteenth Street, to the east by Oak Alley and a residential area, to the north by the Fourteenth Street Corp. property, and to the west



by a residential area and a railroad right-of-way. Buildings on the property range from fair to poor in condition. The property is not fenced.

#### 1.2.4 CECO Properties #4

The two parcels comprising the CECO properties are both located along the Nineteenth Street Right-of-Way. Lot A1 is located closest to the Ohio River (CECO 4 West), while Lot A3 (CECO 4 East) is closer to Duss Avenue. Both properties are currently owned by the Robertson CECO Corporation. The properties are separated by property owned by the Electrical Division of CENTRIA, Inc. The CECO 4 East and West properties, which cover approximately 2 acres, are bordered to the north by the Nineteenth Street Right of Way, to the south by the Fourteenth Street Corp. property, to the east by Oak Street and residential properties, and to the west by the Ambridge Borough Water Authority. No buildings exist on the properties. Lot A1 is secured by a chain-link fence.

#### 1.2.5 Ambridge Industrial Properties #10, 11, 12?

The three parcels (Parcels 10, 11, and 12) comprising the Ambridge Industrial properties are located between Eleventh and Fourteenth Streets. These properties are currently owned by Tom Allen. The three parcels, which total approximately 12 acres in size, are bordered to the north by Fourteenth Street and the Toth property, to the south by the former Bollinger Steel property, to the east by MasterCraft Corporation and Duss Avenue, and to the west by residential properties and Merchant Street. The majority of the parcel's acreage is under roof. Buildings on the properties are in good to poor condition. The properties are not fenced.

#### 1.2.6 Fourteenth Street Corp. Property #2

The Fourteenth Street Corp. property, which totals approximately 18 acres in size, is situated between the Toth property and the CECO Property. The property is currently owned by George Michaels. The property is currently active with each of the buildings rented to various industrial tenants. The buildings on the property are in fair to good condition. The property was formerly a part of the H.H. Robertson Company's Coating Division.

#### 1.2.7 Former Bollinger Steel Property #12

The former Bollinger Steel property is located at the corner of Duss Avenue and Eleventh Street. The property consists of approximately 1 acre. The property is currently owned by Tom Allen. The property was previously owned and occupied by National Electric, a division of H.K. Porter. The property is situated between Eleventh Street and the Ambridge Borough Municipal Building and the Ambridge Industrial properties. The property underwent an emergency removal action under the direction of the U.S. EPA in the early 1990s. The U.S. EPA identified the property as the "Bollinger Steel" site even though Bollinger Corp. only leased a portion of the property for a short time. A chain-link fence secures the southern border of the property.

## 2.0 PHASE I ESA RESULTS AND CONCEPTUAL SITE MODEL

A Phase I Environmental Site Assessment (Phase I ESA) was conducted on each of the properties, in 2003. Section 2.0 briefly discusses the findings of the individual Phase I ESAs.

Accepted 1/4/15 by Co  
assessed in 199

### 2.1 Phase I ESA Scope of Work

The Phase I ESA conducted at each of the Properties consisted of the following tasks:

- Historic Review – Included the review of historical fire insurance maps;
- Government Agency Review – Included a search of federal and state environmental databases for information regarding the subject property and the surrounding area;
- Aerial Photography Review – Included a review of historical aerial photographs;
- Site Reconnaissance – Included a visual evaluation of the general environmental conditions of the subject property; and
- Report of Findings – Provided documentation of the investigation methods, findings, conclusions, and recommendations.

The results of the Phase I ESAs were used in part to develop the scope of work for the Phase II ESA program.

### 2.2 Phase I ESA Findings

Based on the information collected during the Phase I ESA activities, "recognized environmental conditions" as defined by the ASTM Standard Practice E 1527-00, have been identified on each of the properties with the exception of the Nineteenth Street property. However, due to its location hydraulically downgradient of the former H. H. Robertson metal treating processes, galvanizing line, and galbestos treating lines, the potential exists for recognized environmental conditions on this property as well. Pertinent sections of the individual Phase I ESAs are presented in Appendix B, and the findings, as they relate to the Phase II ESA work scope, are summarized below:

#### 2.2.1 Nineteenth Street Right-of-Way Property

The Phase I ESA did not identify any recognized environmental conditions specific to this property. However, based on the identification of recognized environmental conditions in areas hydraulically upgradient of this property, and the nature of those recognized environmental conditions, there is a potential for groundwater quality impacts at this property originating from off-site source areas.

potential for soil contamination due to adjacent property uses.

#### 2.2.2 Toth Property

The Phase I ESA identified an undetermined number of underground storage tanks (USTs) on the property, and noted that historical records were inconclusive regarding the removal of these tanks. Additionally, the Phase I ESA identified unclear historical hazardous waste disposal practices as a recognized environmental condition.

- Only geophysical study to locate tanks



### 2.2.3 CECO Properties

The Phase I ESA identified a former lagoon and an above-ground storage tank (AST) in this area that were both used to hold spent sulfuric acid from the galvanizing line at H.H. Robertson Company. Sludge from the wastewater treatment plant (WWTP) was also placed into the former lagoon. However, the Phase I ESA provided no additional information concerning the location of the former lagoon and AST, or the placement of sludge.

*Therefore, take more samples*

### 2.2.4 Ambridge Industrial Properties

Historical mapping shows the presence of former operations such as galvanizing, machining, pickling, and enameling. The Phase I ESA identified numerous recognized environmental conditions in this area including:

- Wood block flooring;
- Leaking oil drums;
- Electrical transformers with unknown PCB content;
- Former rail sidings;
- Hardened lacquer in storage tanks;
- Potential asbestos material; and
- Paint residuals.

*#11 possible well used for disposal  
ast pile  
transformer yard*

### 2.2.5 Fourteenth Street Corp. Property

Killam Associates performed both a Phase I ESA and a Phase II ESA on the Fourteenth Street Corp. property in 1990. The report identified numerous recognized environmental conditions on the property including:

- Soil contamination around the former Copper Powder Building;
- Pickling acid residue under the pickle line and in the loading dock area;
- PCB-contaminated soils; and
- Asbestos building and pipe insulation material.

*and more*

During discussions with the current owner, George Michaels, it was reported that soil remediation around the former Copper Powder Building was performed and that all contamination had been removed. Pickling residue identified near the unloading dock and the PCB-contaminated soils have not been addressed.

*any due to cleanup this*

*Asbestos?*

### 2.2.6 Former Bollinger Steel

The Phase I ESA identified several recognized environmental conditions associated with the historical operations at the former National Electric. These include:

- Historical usage of the property pipe galvanizing and pickling operations;
- Wood block flooring;
- Oil Drums;

*possible fcnms*



- Miscellaneous debris; and
- Electrical transformers.

A subsurface investigation of soil and groundwater quality was performed in January 2003 by Professional Services Industries, Inc. (PSI). A report was submitted to the PADEP, but was rejected due to a lack of adequate groundwater characterization and non-adherence to the approved work plan. However, the Phase I report stated that the PSI investigation did not detect any constituents at concentrations exceeding the Act 2 standards.

### 2.3 Conceptual Site Model

The Phase I ESA information and other available background information were used to generate a conceptual site model (CSM) for the multiple properties. A CSM looks into historical usage of a property and postulates how potential contamination from the historical operations may have impacted a property. The CSM evaluates constituent migration pathways from sources, such as impacted soil and groundwater or materials historically managed at a site, and how the constituent migration may result in exposures to human or ecological receptors. Unacceptable adverse environmental risks to the identified receptors, modeled under the planned future use of the property, must be addressed as part of the redevelopment.

It is believed that the primary cause of environmental impacts in the project area was through historic spills and leaks of contained materials. These include drums, tanks, and piping associated with the lagoons historical processes. A secondary release mechanism is through leaching and infiltration into the subsurface soils. Secondary sources include both soil and groundwater. Exposure to released environmental constituents would be through ingestion, inhalation, and dermal contact with both soils and groundwater. People potentially exposed to these releases would include redevelopment workers, visitors, employees, residents of the future development, and users of the groundwater.

The CSM will be updated on a frequent basis during the implementation of the Phase II ESA to ensure that the objectives of the Phase II ESA are being met. Updating the CSM helps to ensure that all sources are being evaluated, that pathways of migration from the sources are being assessed, and that all potential exposure routes to a receptor are considered in order to remediate the site to a risk-based standard, consistent with Act 2 and the Partnership's stated objectives.

EPA Standards

### 3.0 WORK TO BE PERFORMED

Based on the results of the Phase I ESAs for the subject properties, there is a need to perform a Phase II ESA to characterize surface and subsurface soil quality and groundwater quality at the multiple properties of interest. The intent of the Phase II ESA program is to perform the environmental quality characterization work necessary to support redevelopment, to support the development of risk-based remedial approaches based on the intended future use of the properties, and to obtain an Act 2 release of liability for each of the subject properties.

This Phase II ESA will be performed using the "Triad" approach as a fundamental basis. The Triad approach uses historic information regarding recognized environmental conditions, along with on-site field screening tools, to collect samples of environmental media through accurate placement of sampling locations. Critical elements of the Triad approach are the flexibility to react to field conditions, observations, and newly acquired information during Phase II ESA implementation, and the use of innovative investigation techniques and technologies.

*any proposed?*

This Phase II ESA Work Plan, through the dynamic CSM, builds in the flexibility to add or relocate sampling locations based on field decisions in order to provide additional visual observation/screening information as warranted, prior to selecting the sample(s) submitted to the analytical laboratory. Field screening techniques will be used to provide information that will allow the field team to efficiently adjust sampling locations, or add/delete sampling locations, depth intervals, etc., to optimize the amount and usefulness of information gathered in the initial field sampling event(s).

*- elaborate*

Based on the CSM (Section 2.3) and information currently known about the multiple properties, the following presents the basis for the strategy and decision logic in implementing the Phase II ESA Work Plan.

Information Needed	Purpose or Rationale	Collection Methods	
		Primary	Secondary
<b>Soil</b> - Determine the presence or absence of site-related regulated substances in soil and their concentration, if present.	Determine if site-related constituents are present in soil at an unacceptable concentration, to support an Act 2 release from liability. Supplement the evaluation of groundwater information.	Advance soil borings and utilize field-based screening and selection of discrete soil samples for analysis.	Field screening methodologies to guide further delineation.
<b>Groundwater</b> - Determine the presence or absence of site-related regulated substances in groundwater and their concentration, if present.	Determine if site-related constituents are present in groundwater at an unacceptable concentration, to support an Act 2 release from liability. Supplement the evaluation of soil information.	Install groundwater monitoring wells and sample and analyze groundwater samples.	--

*?*



The following sections describe the Phase II ESA work tasks.

### 3.1 Conceptual Site Model Update

The CSM (presented in Section 2.3) will be updated, as necessary, based on any additional historical property information obtained by or provided to the project team and the information acquired during Phase II ESA field activities and evaluation of field and analytical data. Significant changes to the CSM will be reported to the U.S. EPA/PADEP.

### 3.2 Property Survey

A Pennsylvania registered land surveyor will be retained to conduct a land survey of each subject property. In addition to locating and marking each property boundary, the survey will provide horizontal and vertical coordinates for site benchmarks that will be ultimately used to survey the proposed soil borings and groundwater monitoring wells.

### 3.3 Soil Quality Assessment

The following section describes the soil sampling to be performed during the Phase II ESA. The proposed soil boring locations are presented based on the Phase I ESA Report, in addition to the historical process locations within the former H.H Robertson and National Electric operations. However, these locations may change based on the initial field screening activities.

— What are they?

#### 3.3.1 Soil Sampling Locations and Rationale

The soil sampling locations and rationale for the Phase II ESA are presented below. All soil samples will be analyzed for both organic and inorganic constituents. Analytical methods are as follows: volatile organic compounds (VOCs) by Method 8260B, semi-volatile compounds (SVOCs) by Method 8270, polychlorinated biphenyls (PCBs) by Method 8082, and total analyte list (TAL) inorganics and cyanide by Methods 6000/7000 and 9014.

→ SW846 Method 5035 recommended

##### 3.3.1.1 Nineteenth Street Right-of-Way Property

The Phase I ESA did not identify any recognized potential environmental conditions. However, based on the potential for contaminant migration onto this property from upgradient sources, soil quality at the property will be investigated with the placement of one soil boring and collection of a minimum of two samples for laboratory analysis from the soil boring. Soil samples will be analyzed for organic and inorganic constituents. Figure 3-1 shows the planned boring location.

few more samples for better coverage

##### 3.3.1.2 Toth Property

The Phase I ESA identified an undetermined number of underground storage tanks (USTs) on the property and unclear hazardous waste disposal practices. Seven soil borings will be installed at this property. The planned locations, shown on Figure 3-1, correspond to the areas outside of the building footprints and the observed locations of the USTs. The borings will be advanced to a minimum of 15 feet below original ground surface. One surface and one subsurface soil sample will be collected from each soil boring. Field observations and organic vapor readings will be used to aid in determining sample collection intervals for laboratory analysis. Additional sampling intervals for laboratory analysis may be



selected based on field observations. Soil samples will be analyzed for both organic and inorganic constituents.

### 3.3.1.3 CECO Properties

*take more sample*

The Phase I ESA identified a former lagoon location and an AST on the CECO 4 East parcel. One soil boring will be installed around and/or within the areas of the former lagoon and the AST. In addition, one soil boring will be installed on the CECO 4 West parcel. Each of the borings will be advanced to a minimum of 15 feet below original ground surface. One boring on the CECO 4 East parcel will be advanced to groundwater. Figure 3-1 shows the planned boring locations. One surface and one subsurface soil sample will be collected from each soil boring. Field observations and field measurements of soil pH will be used to aid in determining sample collection intervals for laboratory analysis. Additional sampling intervals for laboratory analysis may be selected based on field observations. Soil samples will be analyzed for both organic and inorganic constituents.

### 3.3.1.4 Ambridge Industrial Properties

*what about inside bldgs*

The Phase I ESA identified numerous recognized environmental conditions on this property. Six soil borings, shown on Figure 3-1, are planned for these parcels. The borings will be advanced in areas around the perimeter of the building complex. Borings will be advanced to a minimum of 15 feet below original ground surface. One surface and one subsurface soil sample will be collected from each soil boring. Field observations and field measurements of organic vapors will be used to aid in determining sample collection intervals for laboratory analysis. Additional sampling intervals for laboratory analysis may be selected based on field observations. Soil samples will be analyzed for both organic and inorganic constituents.

*more sample*

*tanks, pits, drums*

*pits in floor of bldgs not inspected in Phase I*

### 3.3.1.5 Fourteenth Street Corp. Property

*need more samples*

The Phase I identified numerous recognized conditions on the property. Five soil borings are planned for this parcel. The locations are shown on Figure 3-1. The borings will be advanced in areas around the perimeter of the building complex downgradient or in the vicinity of the pickling acid area, the identified locations of the PCB soil contamination and the former Copper Powder Building. In addition, one soil boring will be advanced upgradient of site operations. Borings will be advanced to a minimum of 15 feet below original ground surface. One surface and one subsurface soil sample will be collected from each soil boring. Field observations and field measurements of organic vapors will be used to aid in determining sample collection intervals for laboratory analysis. Additional sampling intervals for laboratory analysis may be selected based on field observations. Soil samples will be analyzed for both organic and inorganic constituents.

*largest property w/ lots of contain issues*

*leakage*

### 3.3.1.6 Former Bollinger Steel Property

*near WHTP outfall  
near USTs/ASTs  
for storage areas*

The Phase I identified numerous recognized conditions on the property. Two soil borings are planned for this parcel. The locations are shown on Figure 3-1. The borings will be advanced in areas around the perimeter of the building complex. Borings will be advanced to a minimum of 15 feet below original ground surface. One surface and one subsurface soil sample will be collected from each soil boring. Field observations and field measurements of organic vapors will be used to aid in determining sample collection intervals for laboratory analysis. Additional sampling intervals for laboratory analysis may be

*Sand floors*



selected based on field observations. Soil samples will be analyzed for both organic and inorganic constituents.

### 3.3.2 Soil Sampling Methodology

Soil borings will be advanced to groundwater or to equipment refusal/bedrock, whichever occurs first. Borings will be advanced using direct-push sampling equipment, and soil samples will be collected continuously using new acetate liners installed within the direct-push rods. If field conditions dictate that borings cannot be advanced with direct-push equipment, other drilling methods (such as hollow-stem augers with split-spoon sampling) will be used.

All samples will be examined in the field, and field logs noting soil and lithologic descriptions, environmental quality observations, and other pertinent information will be reported. One surface soil sample (collected from zero to two feet below ground surface) and at least one subsurface soil sample (collected at a field-selected depth greater than two feet below grade) will be submitted for laboratory analysis from each boring location. Surface soil samples will be collected and immediately transferred to sample containers. Based on field observations (i.e., visible and/or odorous indications of soil quality impacts), selected aliquots of subsurface samples will be field-screened for total VOCs using a photoionization detector (PID)/organic vapor meter. These results, along with sample location and depth considerations, will be used to select the subsurface soil sample(s) to be submitted for laboratory analysis. If no notable visible, odorous, or field screening variances are observed or measured at a soil boring location, the sample for laboratory analysis will be collected from the soil/groundwater interface or the soil/bedrock interface. Selected samples will be placed in laboratory-supplied containers, documented on chain-of-custody forms, preserved on ice, and transported to the laboratory for log-in and extraction/analysis.

Following completion of soil sampling, boreholes will be backfilled with bentonite chips or pellets, using potable water to hydrate the pellets during placement. The boring locations will be staked, and the location and ground surface elevation of each boring will subsequently be surveyed.

Additional soil sampling details, including sampling/sample handling methodologies and the frequency of collection of quality assurance/quality control (QA/QC) samples, are provided in the "Quality Assurance Project Plan, Phase II Environmental Site Assessments, Ambridge Area Brownfields Partnership" (February 2004, revised April 2004). All field activities will be performed pursuant to the site-specific Health and Safety Plan (HASP) included as Appendix C.

### 3.4 Groundwater Quality Assessment

Groundwater quality at each of the properties will be assessed, both indirectly through the analysis of soil samples and directly through the collection of groundwater samples. The objective of the groundwater investigation is to characterize groundwater quality at each of the properties. However, because of the proximity of the properties, the groundwater quality characterization program has been developed using an area-wide approach for the multiple properties.



Because the properties are located in the vicinity of the Ohio River, it is presumed that the water table interacts with the river. Preliminary information gathered from historic documents indicates that the water table is approximately 60 to 65 feet below the ground surface.

Groundwater quality will be initially evaluated indirectly by comparing soil analyses with the PADEP Statewide Health Standard (SHS) soil-to-groundwater pathway medium specific concentrations (MSCs), established by Act 2. Attainment of the soil-to-groundwater pathway numeric values suggests that soil quality conditions do not have the potential to adversely impact groundwater quality via soil leaching and migration of leachate to groundwater.

Groundwater quality will be directly evaluated through the installation of 11 monitoring wells at the locations shown on Figure 3-1, and the collection of two rounds of groundwater samples. Three monitoring wells (AIP-01, AIP-02, and AIP-03) will be located on the Ambridge Industrial properties. Four monitoring wells (TP-01, TP-02, TP-03, and TP-04) will be located on the Toth property. One monitoring well (CECO-01) will be located on the CECO properties. One monitoring well (NROW-01) will be located on the Nineteenth Street Right-of-Way. Two monitoring wells (FSC-01 and FSC-02) will be located on the Fourteenth Street Corp. property. One monitoring well (BSP-01) will be located on the Bollinger Steel property. Final locations may be adjusted based on the soil sampling results or equipment/property access considerations.

Five of the planned monitoring well locations (BSP-01, AIP-01, AP-02, TP-01, and TP-02) are in a presumed upgradient direction of the group of multiple properties being investigated, and two of the planned monitoring well locations (FSC-01 and FSC-02) are in a presumed downgradient direction of the group of multiple properties. The remaining planned monitoring well locations internal to the multiple property area are intended to monitor specific areas of identified recognized environmental conditions and/or to provide spatial coverage (NROW-01). Monitoring well AIP-03 is located downgradient of Building E, reportedly a historical location of a tool and die and machine shop. Monitoring wells TP-03 and TP-04 are located downgradient of former or current locations of USTs and ASTs. Monitoring well CECO-01 is downgradient of an AST and former lagoon.

The monitoring wells will be installed using hollow-stem auger equipment, and constructed using nominal two-inch threaded flush-joint Schedule 40 polyvinylchloride (PVC) screen and riser. Well screens will be ten feet in length, with 0.010-inch slots. The screen and riser will be installed through the hollow-stem augers. When it has been determined that the well has been effectively seated at the base of the borehole, the augers will be slowly withdrawn while pouring filter sand down the interior of the augers for use as a formation stabilizer. The filter pack will extend to a minimum of two feet above the top of the screen. A minimum two-foot layer of hydrated bentonite pellets will be placed above the filter pack, and the remainder of the borehole annulus will be filled with a cement-bentonite grout. A concrete collar will be used at the ground surface to construct a pad and secure a locking steel protective cover. Additional well installation details are provided in the QAPP.

Although no soil samples from monitoring well locations are planned for chemical analysis, consideration will be given to submitting such samples to the laboratory for chemical analysis, based on field findings and observations.

Following completion of installation, the wells will be developed in preparation for groundwater sampling, and the top-of-casing elevation surveyed. Purging procedures are included in the QAPP. The location of each monitoring well will be marked on the site plan for subsequent use in data evaluation and report preparation.

Two rounds of groundwater sampling will be performed. The first round will occur approximately two weeks following completion of well development activities; the second round will occur approximately three months following the completion of the first sampling round. Prior to sampling, the depth to groundwater in each of the monitoring wells will be measured to determine well development and sample purging volumes, and the total volume of water present in each well will be calculated. The wells will also be examined for the presence of light- or dense-phase free product at this time; if free product is detected in any of the wells, the thickness of product will be measured.

Wells will be purged in accordance with the procedures described in the QAPP and sampled using dedicated bailers in accordance with the QAPP. Any wells with slow recovery rates will be purged at a rate that does not cause recharge water to be excessively agitated. Wells that have been purged to dryness will be periodically checked in an attempt to collect samples within 24 hours of purging. Samples will be obtained when a sufficient volume is available; however, samples will not be collected more than 24 hours after purging.

Samples will be collected and handled in accordance with the QAPP. Filled sample containers will be placed on ice in insulated coolers pending completion of each day's sampling activities. Samples will be packaged for delivery to the laboratory at the completion of each working day, ensuring that the samples remain cool (approximately 4° C) until logged-in by the laboratory. The shipping container will be accompanied by a completed lab-supplied chain-of-custody form.

Groundwater samples will be collected and submitted for analysis of VOCs by Method 8260B, SVOCs by Method 8270, PCBs by Method 8082, and TAL inorganics and cyanide by Methods 6000/7000 and 9014. In accordance with Act 2, groundwater samples collected for TAL metals/cyanide analysis will be field-filtered.

In addition to the samples collected from each monitoring well, quality assurance (QA) samples in the form of duplicates, equipment blanks, field blanks, and trip blanks will be collected and submitted to the laboratory for analysis, in accordance with the QAPP.

Development and purge water will be containerized in dedicated, labeled drums and retained pending receipt and review of the laboratory analysis results from the groundwater sampling events. The containerized water will be appropriately disposed.



#### 4.0 REPORT/NOTIFICATIONS

The results of the Phase II ESA are intended to serve as a basis for pursuing an Act 2 release of liability for each of the properties. Once a full characterization of environmental quality conditions at each of the properties is completed, the most appropriate remediation standard under Act 2 will be selected, and a notice of intent to remediate (NIR) will be submitted to the PADEP.

A Phase II ESA report will be prepared to document the methods and findings of the Phase II ESA. The Phase II ESA report will be fashioned as an Act 2 Remedial Investigation Report. If the results of the Phase II ESA indicate that a release has occurred, but the residual constituents meet one of the Act 2 remediation standards, additional reports may also be prepared as required by Act 2 and submitted to the PADEP.

If, during this assessment, it becomes apparent that environmental impacts at any of the properties require remediation to meet Act 2 standards, a remedial work plan to outline proposed remedial activities (which could serve as a Cleanup Plan under the Act 2 Site-Specific Standard) would be developed.

*compare data to RBCs residential soil and tap water*

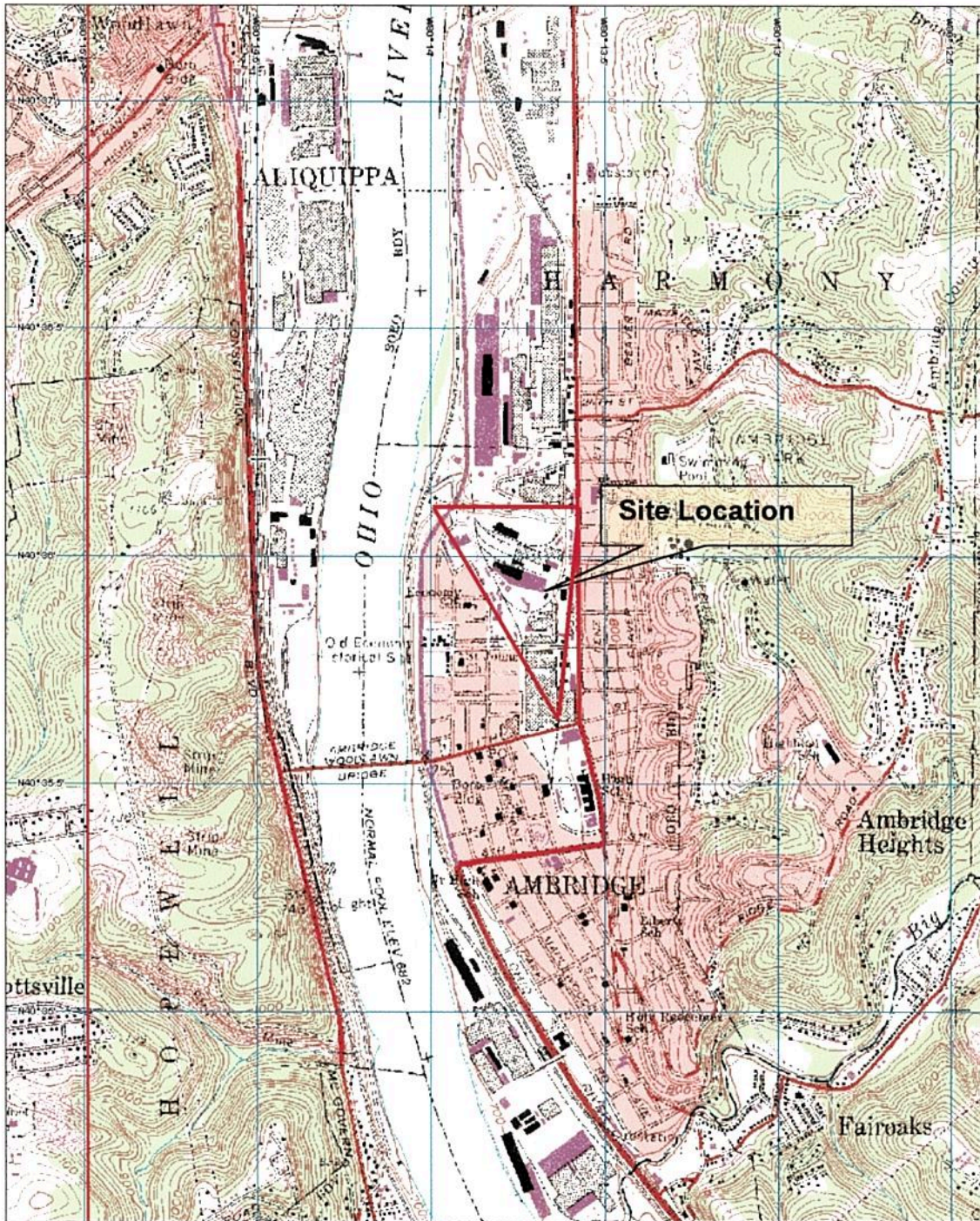


## 5.0 PROJECT SCHEDULE

The following depicts the anticipated schedule for this project:

<u>Activity</u>	<u>Milestone (Days)</u>
Work Plan/HASP/QAPP Approval	0
Mobilization/Begin Field Work	30
Complete Field Work	90
Complete Data Compilation/Evaluation	240
Submit Phase II ESA Report	280

This anticipated schedule assumes that access to all properties is obtained concurrently, and that unusual weather conditions do not adversely affect field activities. Standard analytical turn-around times are also assumed.



3-D TopoQuad © Copyright © 1999 Delorme Yarmouth, ME 04096 Source Data USGS 600 ft Scale: 1:20,000 Detail 13-3 Datum WGS84

REFERENCE: USGS 7.5 MINUTE QUADRANGLE;  
AMBRIDGE, PA 1960-PHOTO-REVISED 1979

SCALE



0 FEET

2,000 FEET



ENVIRONMENTAL MANAGEMENT CONSULTANTS

**SITE LOCATION MAP  
PHASE II ESA WORK PLAN**

**AMBRIDGE BOROUGH BROWNFIELDS PILOT**

**AMBRIDGE, PENNSYLVANIA**

DRAWN BY:	rlb	
CHECKED BY:	ceh	
APPROVED BY:	ceh	
DRAWING NO.	AmbridgeESA	

**FIGURE 1-1**



**Appendix A**  
**The Bridges Village, Ambridge Feasibility Report**

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# **The Bridges Village , Ambridge, Pennsylvania**

Redevelopment from Brownfields  
to Green Village Precinct

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**FEASIBILITY REPORT**

**6/6/03**



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## EXECUTIVE SUMMARY

Following the visit to Pittsburgh, PA, USA by Directors of Moltoni Corporation ( Moltoni ) and Project Planning, Management and Development Pty. Ltd. (PPM), negotiation was commenced with the City of Ambridge and the existing land holders on a Brownfield site of approximately 20 acres between Duss and Merchant Streets, Ambridge, PA. The proposed project provides for demolition, remediation and redevelopment of 420 apartments, 20 duplexes and various other facilities on the site at Ambridge, approximately 12 miles from downtown Pittsburgh. The project is given impetus by the EPA which is applying pressure on the current land owners through punitive fines to encourage remediation. Further incentive is given by the recent ACT 1 & ACT 2 legislation and the possibility of access to supporting financial assistance and incentives to encourage remediation.

The project is multi staged, with Stage 1 demolition targeted to commence March 2004. The total duration for all Stages will be approximately 4 years. The project comprises 717,800 sq. ft. of total development, including 618,400 sq. ft. of residential development. There will be 29 buildings on the site including 22 residential buildings, which range from 3 level duplex units, to 3 level apartments blocks with one 7 level apartment tower. The remaining buildings comprise a storage building, a community centre, an admin building, a medical centre, a fast food store and 2 commercial buildings. There are 204 condominiums in Stage 1 and 90 condos in Stage 2. Stage 3 has 126 condos and Stage 4 has 10 pairs of duplexes. The other facilities, commercial buildings and medical centre will be staged to suit leasing and sales.

The cost of the project is budgeted at USD 62.3 million for all stages, before interest or USD 64 million after interest. However this will be undertaken in four stages each of \$15 - \$20 million. This indicative budget will be modified as required when the sketch designs are developed and the remediation requirements become clearer during the months ahead.

The project will be managed in a series of design and construction lump sum contracts to suit the sales schedule and pre-commitments, using the expertise and management systems of Moltoni-PPM, working closely with local experts in various disciplines. Moltoni-PPM (currently registered in Perth, Australia) is in the process of registering 2 Ambridge companies, Moltoni-PPM Brownfields(USA)LLC and Moltoni Ambridge LLC (Moltoni Ambridge). The latter company will be a special purpose LLC formed for the sole purpose of undertaking the demolition, remediation and development. The current land owners and Moltoni PPM ( through Moltoni PPM Brownfields ) will be the share holders of Moltoni Ambridge. At conclusion of the development, the profits of the special purpose LLC, Moltoni Ambridge will be distributed to the stakeholders and the LLC will be liquidated.

Throughout the re-development process, a system of sign-offs will be put in place, with Moltoni PPM managing the project and the development to a defined brief and budget. Separate MOUs will be put in place between the stakeholders and Moltoni PPM. Each current land owner will provide an irrevocable Option, which will be exercised by Moltoni Ambridge at an early stage in the commencement of the re-development. The shareholdings in Moltoni Ambridge, of the Greater Site (that is the whole site for the development being the total of the individual properties of the current land owners), will be adjusted at the point and time when the Option is exercised, to reflect the new ownership proportions, defined in the MOU documents. Variations to the contract will be permitted, only if agreed and signed off by both PPM Moltoni and stakeholders of the special purpose LLC.

This Feasibility Report summarises the proposed scope of the project and sets a framework for the MOUs, contracts, ownership, financial constraints and project schedule within which the project will be developed.

## 1 INTRODUCTION

### 1.1 Background

The project site is occupied by numerous Brownfields buildings. Many of these are derelict or in a poor state of repair. While some buildings are occupied or leased, few are being used for their original intended uses and the whole site is extremely inefficiently utilised. Parts of the site have dis-used railroad tracks and industrial contamination is known to exist.

A Phase I remediation plan has been compiled and the EPA is moving to impose fines on the current property owners. These fines will escalate if substantial action to remediate and decontaminate is not undertaken soon. The current property owners all have pre-occupation with other businesses, than that of demolition, remediation and development.

In late 2002, following a visit to Pittsburgh by Moltoni Corporation an approach was made by the stakeholders, through City of Ambridge, for Moltoni PPM to become involved in the project. Following negotiations this year, the project will include Phase 2 & 3 remediation studies, demolition and remediation, while at the same time managing and developing design and construction of residential and other facilities appropriate for Ambridge.

Following a further visit to Ambridge by Moltoni PPM Directors in May 2003, a proposed site has been defined as an appropriate project to develop. The project has the support of City of Ambridge as well as numerous other interested parties.

This report has been initiated following discussions between the stakeholders and Moltoni PPM which has compiled this report and delivery proposal. It is envisaged that Moltoni PPM would maintain an ongoing role as Project Managers and Developers, from project approval to the completion of the project.

## 2 PROJECT DESCRIPTION

### 2.1 Site Location

The site is located on a flat site, bounded by Merchant Street, Eleventh Street, Duss Street and Sixteenth Street, of approximately 22 acres in the Borough of Ambridge, Beaver County, PA. The site is orientated north-south and runs parallel to Route 65. Definition of the site through drawings is provided at the Appendix to the MOU documents.

The proposed project comprises 420 condominiums and 20 duplexes as well as other facilities.

The details of the Condominiums are shown in drawings SK 1, 2, 03, 04, 05, 06 and 7 and the following table shows the Proposed Schedule of Accommodation.



**Schedule A**  
**Schedule of Accommodation**

Unit	Square Foot	\$ / Sq Ft	Cost	Units
<b>Allen &amp; Allen Greene Property</b>				
Condo Blocks 1-3 (3 Levels)	120,000	\$60	\$ 7,200,000.00	90
Condo blocks 5 to 8 (3 Levels)	160,000	\$60	\$ 9,600,000.00	120
Condo block 4 (7 Levels)	110,400	\$70	\$ 7,728,000.00	84
Building 10 (Community Center)	10,000	\$45	\$ 450,000.00	1
Building 9 (Admin Centre)	3,800	\$50	\$ 190,000.00	1
Building 25 (Existing HH Robertson Building to Medical Center)	11,000	\$50	\$ 550,000.00	1
Commercial Building 28	12,000	\$50	\$ 600,000.00	1
Commercial Building 29	25,000	\$50	\$ 1,250,000.00	1
Fast Food Building 27	5,000	\$50	\$ 250,000.00	1
<b>Toth Property</b>				
Condo Blocks 11-13 (3 Levels)	120,000	\$60	\$ 7,200,000.00	90
Condo block 14 (3 Levels)	48,000	\$60	\$ 2,880,000.00	36
10 Duplex Pairs (15 - 24)	60,000	\$60	\$ 3,600,000.00	20
Building 26 (Storage)	32,000	\$15	\$ 480,000.00	1
Building 30 (Kiosk)	600	\$50	\$ 30,000.00	1
<b>Total Area of Condos &amp; Duplex</b>	<b>618,400</b>		<b>\$38,208,000.00</b>	
<b>Total Support Facilities Building Area</b>	<b>99,400</b>		<b>\$ 3,800,000.00</b>	
Roads & Drainage	400,000	\$2	\$ 800,000.00	
Landscaping			\$ 250,000.00	
Project Contingency		0%	\$ -	(Contingency in Feasibility)
<b>Greater Site Total</b>	<b>717,800</b>		<b>\$43,058,000.00</b>	<b>420 condos and 20 duplexes</b>

### 3 DESIGN, DEVELOPMENT DELIVERY AND SCHEDULE

#### 3.1 Design

An important aspect of the project involves recognition that it is not simply a remediation project. It is essential to project beyond demolition and remediation to establish what would be put in place of the existing Brownfields. Without such a projection and a total development strategy, the funding of remediation will be prohibitive. It will also probably cost more to remediate the site, if the owners are unsure of what will be developed in future.

This leads us to towards definition of our target market at a very early stage.

Based on current research, there is a market demand for higher quality medium value aged care condominiums in the Ambridge area. There are few examples of relevant projects because there does not appear to be much supply of suitable accommodation for the target market. This market will be directed towards the "baby boomer" or "empty nester", seeking quality accommodation, close to all amenities which has user-friendly design features. These features include a secure village environment, adequate parking, and elimination of steps, wider passage ways and doors which permit wheel chair access as well as assisted bathrooms and quality facilities such as cabled call access to assisted care. A fuller definition of the design specification is provided elsewhere in this report.

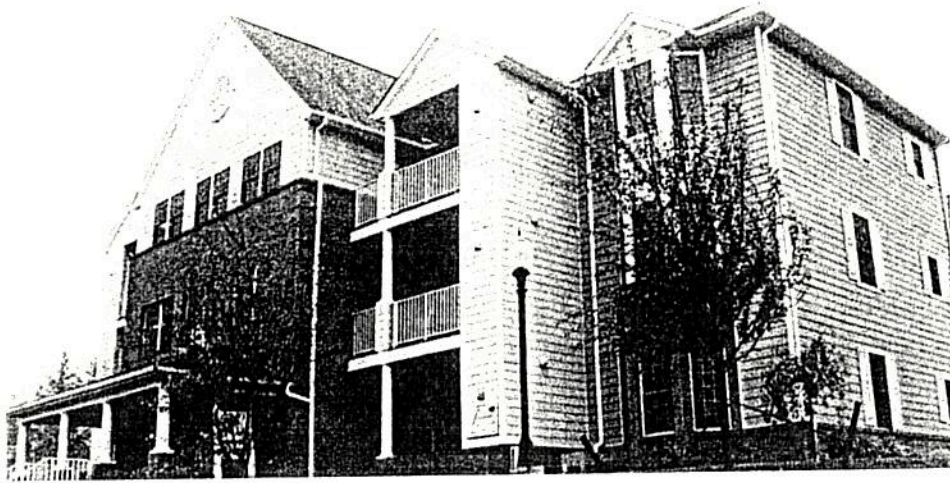
The design brief for the project will evolve from the Indicative Sketch Plans or notional concept design prepared by the architect for Moltoni PPM, for the proposed re-development of the Greater Site, for the purpose of negotiations with the Parties. These indicative sketch plans may be modified after discussions and negotiations with local realty experts, aged care facility operators, etc. until a Final Design is prepared for each Stage of the proposed project.

The indicative specification and the indicative sketch plans together with photographs of proposed architectural external elevation treatment, give an indication of the general standard of the village accommodation. The emphasis will be on creating an attractive, green, secure village environment, with residential condominiums priced mostly in the range of \$150,000 to \$190,000. All of that will appeal to the retirees seeking a new abode for life at an affordable price.

The accommodation will enjoy attractive internal precinct views of the green landscaped village. Orientation will generally be south facing, with some views to the hills and some limited river views. The end product will provide a significant improvement in the urban streetscape, from the current Brownfields "eye-sore".

The following page shows an artists impression of the architectural elevation. Note how the different textures have been used to create interest, reduce scale and soften the aesthetics of the building. The architects will also attempt to capture the classic 4-square Pittsburgh cottage elevation treatment.





Proposed architectural external elevation treatment

### 3.2 Development Delivery

Development delivery would be project managed by Moltoni PPM using the project management systems and experience of Project Planning, Management and Development Pty. Ltd., in conjunction with local expertise and the stakeholders.

The project will be managed in a series of design and construction lump sum contracts to suit sales schedule and pre-commitments, using the expertise and management systems of Moltoni-PPM, working closely with local experts in various disciplines.

Moltoni Ambridge, will be a special purpose LLC for the sole purpose of undertaking the demolition, remediation and development. The current land owners and Moltoni PPM (through Moltoni PPM Brownfields) will be the share holders of Moltoni Ambridge.

Throughout the re-development process, a system of sign-offs will be put in place, with Moltoni PPM managing the project and the development to a defined brief and budget. Each current land owner will provide an irrevocable Option, which will be exercised by Moltoni Ambridge at commencement of the re-development stage, (currently targeted for no later than March 2004). The shareholdings in Moltoni Ambridge, of the Greater Site (being the total of the individual properties of the current land owners), will be adjusted at the time when the Option is exercised, to reflect the new ownership proportions, defined in the MOU documents.

A project control group (PCG) will manage the project and convene monthly to address reports on budget, progress and schedule. Variations to the contract will be permitted, only if agreed and signed off by both PPM, Moltoni and the stakeholders of the special purpose LLC.

The original design brief schedules and sketch plans will be developed by Moltoni PPM, in accordance with the MOU documentation between Moltoni PPM and the stakeholders.

Before committing to construction, a pre-determined number of sales will be established to satisfy lenders and the stakeholders that an appropriate level of risk management is in place. Moltoni PPM have a good track record of such risk management in developments and in some cases, there is a complete sell-out of accommodation before construction commences. Initial research from Howard Hanna and Prudential Realty shows the existence of a real market for a well designed product targeted at the "empty nesters" who have sufficient retirement funds to afford a retirement re-investment which offers a lifestyle change, yet remains within 10 miles of current domicile.

Verification of sales interest will be thoroughly tested by realty professionals and appraisers. Decontamination and remediation will be carried out to the approved EPA standards for residential use of the land.

Where practical, agreements will be entered into with interested tenants such as the Trinity College of Divinity or selected commercial tenants including a medical centre. Purpose built developments will be tailor-made for pre-commitments with long leases or sales in place ahead of development. Display suite sales and sales made with support from retirement village operators will occur. Condominiums will generally be sold off the plan. The market demographics will be thoroughly tested and researched to provide greater certainty about the sales position estimate, prior to any advertising, promotion, selling or formal efforts to market the units.





## 4 DESIGN & INDICATIVE SPECIFICATON

### 4.1 Indicative Specification

#### Overview

The following indicative specification is directed towards providing a secure, quality living environment in The Bridges Village, Ambridge. The Condominiums will be architecturally designed to be in harmony with secure surroundings, yet close to all amenities and shops in Ambridge. The Bridges Village will consist mainly of three-storey buildings each with its own identity, providing secure, luxurious, urban living at its finest.

#### Quality Construction Features

- Sound insulating system between residences and floors – Floors separated by Gypcrete and R-19 fibreglass insulation – Walls between residences separated by dual wall construction with two layers of R-11 insulation
- R-13 and R-19 fibreglass insulation in outside walls with R-38 insulation in L3ceilings
- Electronically wired smoke detectors with battery backup for added safety
- Fibre optic wiring for cable TV, telephone and security call system
- Ground fault interrupt (GFI) safety outlets in kitchen and bath

#### Energy Efficiency Features

- Energy Star® Home
- Economical gas heating, cooking and hot water
- Individually controlled direct vent 90% high-efficiency natural gas warm air heating
- Central Air Conditioning
- Digital clock thermostat for easy climate control
- Instantaneous gas energy saving hot water

#### Interior Features

- Spacious floor plans with one-level living
- Dramatic 9' ceilings
- Professionally decorated common entry foyer
- Private recessed hallway entrance to each residence
- Walk-in closet in Master bedroom
- Bright and airy double pane Pella® insulated windows with screens
- Generous passage widths and wheelchair accessible doorways.
- No steps interior design philosophy
- Capacity for assisted bathrooms and shelves
- Interior lighting packages
- Ceramic tile for bath and foyer
- Raised six-panel interior doors
- 3" Baseboard and 2 1/4" casing and trim
- Stain resistant carpeting throughout, except tiled wet areas
- Lever-handle hardware on all interior doors
- Separate laundry area with no-wax vinyl flooring
- General Electric® washer and dryer included
- Spacious closets with vinyl coated ventilated shelving
- Sprinkler systems for fire protection and safety
- Convenient disposal location and recycling center on each floor



Luxury Bathrooms

- Lavish master bath with separate shower and Kohler® Mariposa soaking tub
- Ceramic tile floor, shower walls and second bath tub walls
- Showers with obscured glass enclosure in master bath
- Oak, maple or designer white or almond cabinets with bevelled edges and laminate countertops
- Exhaust fan
- Kohler® plumbing fixtures to include:
  - Kohler® dual china sinks in most master bath floorplans
  - Kohler® Coralais chrome tub and shower faucets with anti-scalding system
  - Kohler® Coralais single-lever sink and bath faucets
  - Kohler® Wellworth toilets
  - Kohler® cast iron Villager tub in second bathroom

Gourmet Kitchens

- Beautifully crafted cabinetry in a wide choice of oak, maple, or designer white or almond cabinets with Corian countertops
- General Electric® dishwasher, gas range with self-cleaning oven, garbage disposal and spacemaker microwave vented to the exterior
- General Electric® 18.0 cubic foot frost-free refrigerator with ice maker
- Kohler® stainless steel, two compartment sink
- Kohler® Coralais lever faucet with spray attachment
- Built-in pantry
- Hardwood flooring

Exterior Features

- Clapboard siding with decorative shakes, brick, masonry and 25-year dimensional fibreglass roof shingles
- Private balconies
- Reserved lower level parking with elevator access
- Secure front entrance
- Individual private storage areas
- Weatherproof ground fault interrupt (GFI) safety outlets on balconies

Community Features

- Professionally designed landscaping with some underground sprinkler systems
- Lawn and landscape maintenance and snow removal provided by the Homeowner's Association
- Underground electric, telephone, gas and cable service
- Public water and sewer
- Convenient general mail delivery in each building's entry vestibule
- Landscaped secure Village Park with Community Centre and Medical Centre
- Harmony of nature greenscape and community village
- Cobble paved roads for aesthetics and speed control
- Restricted entry points and distinctive entry feature to village
- Secure walls and hedges surrounding village
- Decorative colonial street lamps
- Exquisite arboretum of native flowers, trees and shrubs.

## 4.2 Advantages of Moltoni PPM systems

The advantages of Moltoni PPM systems include: -

- Informing and working with the community as an integral part of the development
- Bright future (big picture) development concepts for better lifestyle outcomes
- Efficiency and safety of proven demolition methodology
- World best practice remediation strategies
- Working relationships with best practice environmental consultants
- Turnkey Brownfields through planing to living communities
- Totally integrated development strategy
- Shortest timeframe from start to finish minimising impacts on adjacent community
- International design standards
- Major international project control systems
- Cost control and reporting formats
- Inspection and testing management services
- Schedule and schedule controls
- Extensive project and construction management experience
- Project management supervision skills and personnel
- Access to world best practise design teams
- Access to funding resources to supplement project cashflow
- Established relationships with international retirement organisations
- Ability to joint venture and establish good working relationships in Ambridge

## 4.3 Quality Control

Moltoni PPM give a high priority to the provision of quality control and assurance by the contractors, consultants and inspectors. Moltoni PPM have check lists and an established strategy for Quality Control. This includes:

- Excellent relationship with EPA
- Making every consultant and contractor submit regular QC reports.
- Regular inspections, testing programme (ITP) and follow up reports.
- Offsite procurement checking by independent accredited consultants.
- Workshop drawings review and approvals.
- Spot checks on inspections of design consultants.
- Spot checks on Contractors.
- On site quality inspections and audit certifications
- Signoff by EPA and environment consultant that each area is suitable for construction, before remediation process ends.
- Understanding and integrating community needs into design

Moltoni PPM will arrange for the timely provision and approval of all necessary applications and approvals, prior to issue of Occupation Certificates and Completion Certificates, to contractors.



#### 4.4 Safety

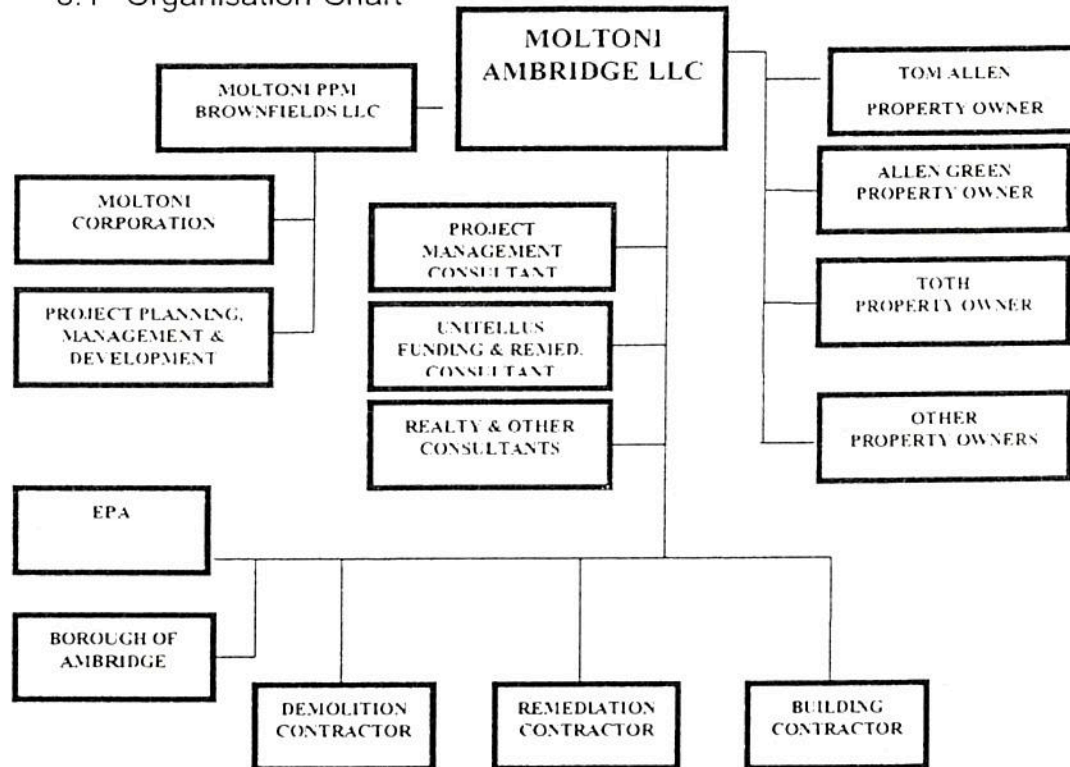
Moltoni PPM have a track record and determination to deliver projects, incident free and accident free. Safe work environments produce happier workplaces and better communities. Our aims is to employ systems of work that will deliver quality construction outcomes with nil lost time injury, through careful planing, good management practices and development of good understanding and teamwork.

#### 4.5 Independent Surveys & Sign-offs

Moltoni PPM has an excellent record in arranging genuine independent surveys and sign-offs to ensure quality control and standards are maintained. Moltoni PPM propose to send a specialist QA manager to Ambridge to oversee quality control. This manager would co-operate and work closely with Moltoni Ambridge to ensure highest standards and safety.

## 5 OWNERSHIP & RISK MANAGEMENT

### 5.1 Organisation Chart



#### 5.1.1 Ownership and Control

Ownership of the Options (The Greater Site) will be as shown above.

Monthly budget and cost reports will be produced by PPM throughout the project. These reports will be based on information signed off by the stakeholders and Moltoni PPM Brownfields.

PPM will utilize its standard project management procedures and form-based reporting systems. PPM will also employ a full time site project manager in Ambridge, supported by local staff, as well as a Perth based design manager supported by project and cost control staff.

### 5.2 Risk Management & Exit Strategies

A number of exit strategies and other commercial safety nets will be put in place as part of the Moltoni – PPM groups total project risk management. Any development, always carries some risks, however, the Moltoni – PPM approach is to minimise or eliminate risks wherever practical.

As the project evolves, our management is constantly focused on risk reduction. At the monthly PCG (Project Control Group) meetings, all stakeholders will be consulted on strategies and risk reduction is always our prime guideline for managing the project.



**Salient risk reduction strategies which will be in place include: -**

- Careful analysis of the project is done at commencement and documented in reports which are circulated to stakeholders. These reports are reanalysed, updated and modified several times before the project is formally launched
- Research is obtained from leading commercial firms specialising in each aspect of the project eg. Remediation, Demolition, Disposal, Building, Realty, Funding, Insurance, etc.
- Key assumptions are spelled out clearly before commencement
- Assumptions are tested with market quotations, not just consultant's estimates
- Conservative assumptions are made so that we are usually able to better actual performance and improve on targets
- Conservative low selling prices, conservative high building cost budgets, longer schedules with allowances for delays, are made in our feasibility study
- Conservative allowances are made for remediation in respect of subsidies, low interest loans, tax concessions, free consultant work, tax credits etc.
- Funding contingencies are built into budgets
- Regular management of contingency and monitoring against expenditure and progress occurs on a monthly basis throughout the project
- Regular reporting and quality control is implemented via a system of self-reporting and cross checking carried out by the PPM Project Manager
- Comprehensive expenditure and cash flow reporting which compares planned expenditure with actual, is done on a monthly basis
- A first exit strategy is available to any of the current land holders to withdraw from the project within 30 days of the revised budget prepared after Phase 2 Remediation Assessment is prepared, provided that the Party withdrawing pays all costs incurred for the project up to the date of withdrawal.
- A second exit strategy is available to any of the current land holders to withdraw from the project within 30 days of the revised budget after demolition and Phase 3 Remediation is completed, provided that the parties pay all costs incurred for the project up to the date of withdrawal.
- Fixed lump sum quotations are used for all substantial work packages.
- Guaranteed maximum price contracts are used, which contain incentives for performance including penalties and bonuses
- A staged approach to development is adopted such that in a \$50 million project, the maximum value of each stage would be kept between \$15 - \$20 million, thereby reducing theoretical total exposure
- Relating of each work stage, to pre-commitments for sales and leases is implemented, prior to commitment for construction to eliminate risk exposure where ever practical
- Management of cash flow expenditure is restricted to match cash flow income, such that the project becomes self-funding as soon as practical. This occurs by funding later stages from income derived out of earlier stages
- Minimal approach to capital injections or equity funding is required with all funds borrowed and interest and repayments factored into the financial model
- A "hands-on" flat structured approach to management is implemented with senior management working close to ground zero.
- Continuity of management personnel is implemented from start to finish

**Salient risk reduction strategies continued: -**

- PPM – Moltoni will rely on its vast track record of experience. Such experience also includes the skill to tap into local experience, particularly in managing the details of the project
- A hierarchy of bank guarantees and performance guarantees is implemented
- Moltoni – PPM insists on strong balance sheets of key participants in project, especially construction contractors
- Competitive bids are obtained for all large parcels of work, based on well defined and documented works scopes. However, Moltoni – PPM thereafter negotiate with best bids to arrive at non-adversarial deals. This win-win approach to contracting allows all parties to emerge from complex redevelopments with some benefits
- When the contracts are bid, all contractors qualifications are addressed prior to award of contracts by having contractors price the risks upfront
- Use is made of retentions and conservative certification of progress payments
- Transparency of reporting with joint venture partners is very much part of the Moltoni – PPM corporate culture which allows any problems to be dealt with as they occur, as evidenced in our track record of long term business relationships.

**6 CAPITAL COST****6.1 Cost Estimate Budget**

Indicative cost estimates for the various facilities are shown separately and summarized in the feasibility cost. In summary, Indicative costs are estimated as follows: -

<b>Item (All in USD)</b>	<b>Total</b>
Land Acquisition Cost	3,420,000
Consultant Cost & Utilities Costs	2,143,154
Demolition Cost	1,476,000
Remediation Cost, after credit allowance	4,600,000
<b>Subtotal Upfront capital costs</b>	<b>11,639,154</b>
Residential Construction Cost	44,184,970
Non-residential Facilities Construction Cost	3,800,000
Contingency on Construction	2,641,361
<b>Subtotal Cost before interests</b>	<b>62,265,485</b>
Interest	1,762,400
<b>Total Estimated Cost</b>	<b>64,027,885</b>

This cost estimate will be verified by checking with Moltoni Corporation and other sources in Ambridge. However, based on the preliminary capital cost estimates, the feasibility study indicates that the development has good financial viability. Furthermore, it provides a basis for the site remediation to occur, without the need for investment and with the opportunity for profit.

**6.2 Feasibility Study**

The feasibility study shows the project cost of approximately \$ 64 million in detail. Refer feasibility study. Total revenue is estimated at \$ 79.6 million giving profit of \$ 12.87 million. This represents a return on turnover of 20.68%. While normally, banks prefer return % to be around 30% at feasibility stage, funding for remediation works and the Brownfields environmental should make a lower rate of return acceptable.



## 7 CONCLUSION AND SUMMARY OF RECOMMENDATIONS

### 7.1 Conclusion

The project involves demolition, remediation and development of 29 buildings including 420 condos and 20 duplexes. The feasibility study shows the project cost of approximately \$ 64 million in detail. Total revenue is estimated at \$ 79.6 million giving a projected profit of \$ 12.87 million.

This represents: -

- A return on turnover of 20.68% for all shareholders in Moltoni Ambridge
- 55% return to land owners on upfront capital cost of \$11.4 million (49% x of Remediated land value)
- A return of 121% to land owners on current land value of \$3.4 million plus interest of \$1.8 million
- Avoids fines and gives full compliance with EPA requirement to remediate land (Removes environmental liability currently weighted against owners)
- Avoids risk of landowners investing \$7 million, without any plan for the site
- Increase to land owners on upfront land value of \$3.4 mil to \$5.7 mil
- Saves land owners from having to inject any capital

This project represents an outstanding opportunity to convert derelict and dilapidated Brownfields properties into a Greenfields Village, which should be financially beneficial to all stakeholders, while at the same time satisfying the requirements of the EPA.

### 7.2 Recommended Action

The following steps are recommended: -

- a) Check the budget by Moltoni Corporation
- b) Negotiate and sign MOU between PPM and Moltoni Corporation
- c) Visit Ambridge and obtain formal government licences and sign MOUs with Landowners
- d) Obtain rezoning permission from Borough of Ambridge
- e) Establish Moltoni PPMBrownfields LLC
- f) Establish Moltoni Ambridge LLC
- g) Conduct phase 2 remediation study
- h) Confirm budget for entire project
- i) Negotiate with end users and conduct pre-sales campaign
- j) Confirm staging and development schedule according to pre-commitments
- k) Obtain bank loan funding and subsidies
- l) Arrange formality with funding
- m) Recruit site staff
- n) Complete design and budget check
- o) Sign formal contracts for demolition, remediation and building
- p) Start on site with demolition and phase 3 remediation around March 2004

## 8 APPENDIX

### 8.1 Plans and Concept Layouts

The plans and layouts are shown attached, refer to SK 1 to Sk07.

#### 8.1.1 SK 1 – Master Plan South Site and,

#### 8.1.2 SK 2 – Master Plan North Site, are shown in the next 2 sheets, which overlap at Fourteenth Street.

The design concept of the village is to create a secure greenscape village precinct. Fourteenth Street will be closed and the buildings will generally be restricted to 3 level. The buildings will be set asymmetrical and turned to face off center, with the plans pivoting about the entrance foyer. This creates a more interesting layout and breaks up the elevations of the buildings to create architectural interest. It also allows sharing of elevators to reduce costs. The effective of this design concept is to disguise the density and create a cottage atmosphere.

There will be a single entry to the site for the residential village which is shown at the bottom left hand of the drawing at Fourteenth Street. Extensive flower planting and evergreen landscaping is an essential part of the urban renewal design philosophy to achieve transformation from brown-fields to greenscape.

As shown on the plan, buildings 1 – 3 and 5 – 8 are 3 level residential condominium blocks, each containing 10 units per level.

Building 4 shows a 7 level residential condominium block, containing 10 units per level, which will probably be utilized by the Trinity College.

Building 10 is a community center building which will house facilities for leisure, entertainment and community activities.

Building 9 & 25, shown at the top left hand of the plan in Fourteenth Street are achieved by reuse of the existing Allen offices and HH Robertson Buildings which will be used for Administration and Medical Center.

As shown on the plan SK 2, buildings 11 – 14 are 3 level residential condominium blocks, each containing 10 units per level, while building 14 has 12 per level.

The commercial and retail/ fast food buildings are shown opposite the Borough offices in Eleventh Street at the right hand of the drawing. Other features are: -

- Buildings 15 – 24 are 3 level duplexes
- Building 26 is a storage building
- A new sub-station is allowed for at building 26
- Parking in the basement and cobble paved streets allows 2 bays per unit
- Tennis courts are shown at bottom left of SK 2
- Mini putting green – 3 holes is shown top left hand SK 1 near administration building



**8.1.3 SK03 – 30 Apartment Condominium 10 Plex (3 Storey Residential) Ground Floor Plan and**

**8.1.4 SK04 – 30 Apartment Condominium 10 Plex (3 Storey Residential) Typical Floor Plan are shown on the next 2 sheets, key features are: -**

- Individual balcony to each unit
- No steps
- Secure private entry foyer
- Economy of scale in combining units with individual design philosophy
- Close proximity to lift, no more than 40 metres from front door
- Private aspect to each unit, using service duct cupboard, balconies
- Generous living spaces
- Double bathrooms
- In house laundries

Refer to report section 4 “design and indicative specification” for fuller specifications.

**8.1.5 SK05 – 30 Apartment Condominium 10 Plex (3 Storey Residential) Typical Basement Floor Plan**

The typical basement floor plan shows 32 car bays and 40 stores. This provides secure parking in a part basement reach by a ramp to the side of the main entrance foyer.

The lift and fire stairs extend to the basement.



**8.1.6 SK06 – 32 Undercroft Carbays10 Plex (3 Storey Residential) Section 01 and**

**8.1.7 SK 7 – 7 Level Building 4 Section are shown in next 2 sheets which indicate the cross sections**

Key features are: -

- Part basements
- Balconies
- High ceilings
- Tree-lined streetscape
- Double level to the 3<sup>rd</sup> floor apartments with upstairs bedrooms

SK06 is the typical section, however we have included a free hand sketch SK 7 to show the scale of the 7 level (with 8<sup>th</sup> loft and basement) building.

## 8.2 MOU and Option to Purchase

**Refer separate MOU documents, if applicable: -**

- a) between Moltoni PPM and Toth.
- b) between Moltoni PPM and Allen
- c) between Moltoni PPM and Allen-Green

## 8.3 Feasibility Study

Refer Feasibility Study attached to MOU